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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hee Jung Hong

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EXAMINER

BRIGGS, NATHANAEL R

ART UNIT

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2871

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/742,911	Applicant(s) HONG ET AL.	
	Examiner NATHANAEL R. BRIGGS	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,7-9,12,13,15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7-9,12,13,15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/2/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09 October 2008 has been entered.

Response to Arguments

2. Applicant's arguments filed 09 October 2008 have been fully considered but they are not persuasive. Applicant argues that the combination of Kono in view of Nakanishi, and in further view of Arledge does not render claim unpatentable, since Arledge discloses an FPC connected to a *display driver* rather than to a *touch panel driver*. While Examiner agrees with Applicant's understanding of the structure of the invention of the present application and also the invention of Arledge, combination of Kono and Nakanishi with Arledge is intended only for the modification of the *FPC itself*, and not the nature of the connections to the IC driver of the display and the touch panel. Therefore, it would have been obvious to modify *only* the structure of the FPC of Kono by the structure of the FPC of Arledge, for the benefit of reduction in weight and size of the display unit by utilizing through holes, as exemplified by Arledge (column 3, lines 67-68; column 4, lines 1-4). Therefore, Applicant's arguments are not persuasive.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 4, 7-9, 12, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kono et al. (US 2001/0043291) in view of Nakanishi et al. (US 6,781,642), and in further view of Arledge et al. (US 5,436,744).**

5. Regarding claims 1 and 9, Kono discloses a touch panel for a display device and a method of fabricating a touch panel for a display device (see figures 1, 4 and 5; for instance) having a driver IC, comprising: forming upper (2) and lower (3) substrates; forming first (4) and second (5) transparent electrodes on opposing entire surfaces of the upper (2) and lower (3) substrates; forming first (6) and second (6) metal electrodes being electrically connected to the first transparent electrode (4) in the periphery the first transparent electrode (4) along a first direction, and third (16) and fourth (16) metal electrodes being electrically connected to the second transparent electrode (5) in the periphery of the upper and lower sides on the second transparent electrode (5) along a second direction substantially perpendicular to the first direction; a plurality of metal electrodes (7) adjacent to each of the first (4) and second (5) transparent electrodes on the respective substrate of the first (4) and second (5) transparent electrodes that electrically connect the first (4) and second (5) transparent electrodes to each other in response to a touch on the upper substrate (2); and forming a FPC (11) having a

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plurality of signal applying lines extended from the upper (2) and lower (3) substrates, and having a first part (parallel with the right-hand substrate (3) edge) extended from the edge of the display device to connect the signal applying lines to the plurality of metal electrodes and a second part (portion perpendicular from the substrate (3) edge) extended from the first part, the first and second parts being perpendicular to each other, and a plurality of through-holes (broken lines on element 11) between the first part and the second part of the flexible cable. However, Kono does not expressly disclose wherein the FPC extended to a rear side of the display device for applying signal voltages to the metal electrodes, wherein the FPC is bent over an edge of the upper and lower substrates from a top to a bottom of the display device, having the second part overlapping the driver IC, wherein the driver IC arranged on the rear side of the display device, nor wherein a portion of first signal applying lines of the plurality of signal applying lines on a lower surface of the first part of the FPC connects to a portion of the first signal applying lines of the plurality of signal applying lines on an upper surface of the second part of the FPC through the plurality of through holes, so that the signal applying lines aren't directly in contact with the driver IC.

6. Regarding claims 1 and 9, Nakanishi discloses a touch panel for a display device and a method of fabricating a touch panel for a display device (see figures 5 and 6, for instance) having a driver IC (44), comprising: a FPC (47) extended to a rear side of the display device (43) for applying signal voltages to the metal electrodes (21), wherein the FPC (47) is bent over an edge of the upper and lower substrates (41) from a top to a bottom of the display device (43), and having a first part (parallel with the right-hand

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substrate (41) edge) extended from the edge of the display device (43) to connect the signal applying lines to the plurality of metal electrodes (21) and a second part (portion perpendicular from the substrate (41) edge) extended from the first part, and has the second part overlapping the driver IC (44), wherein the driver IC (44) is arranged on the rear side of the display device (43) for driving the display device.

7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the connection structure of Nakanishi in the touch panel of Kono. The motivation for doing so would have been to manufacture a lightweight, touch panel with sufficient strength to withstand mechanical shocks or drops, as exemplified by Nakanishi (column 7, lines 38-51).

8. Regarding claims 1 and 9, Arledge discloses a FPC (see figures 3, 5 and 6, for instance) wherein a portion of first signal applying lines (small portion connected to IC 70) of the plurality of signal applying lines (66) on a lower surface of the first part of the FPC (60) connects to a portion of the first signal applying lines (adjacent to IC 70) of the plurality of signal applying lines (66) on an upper surface of the second part of the FPC through the plurality of through holes (68) (if the FPC structure was applied to the FPC of Kono in view of Nakanishi, the signal applying lines of Kono in view of Nakanishi aren't contacted with the driver IC).

9. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the through hole structure of Arledge in the touch panel of Kono in view of Nakanishi. The motivation for doing so would have been to further reduce the weight and size of the display by utilizing the through holes, as exemplified

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by Arledge (column 3, lines 67-68; column 4, lines 1-4). Claims 1 and 9 are therefore unpatentable.

10. Regarding claims 4 and 12, Kono in view of Nakanishi, in further view of Arledge discloses the touch panel of claim 1 (see Kono figures 1, 4 and 5; Nakanishi figures 5 and 6; Arledge figures 3, 5, and 6, for instance), and Nakanishi further wherein the FPC (47) extends through the driver IC (44) of the display device (43) to be connected to a printed circuit board (44). Claims 4 and 12 are therefore unpatentable.

11. Regarding claims 7 and 15, Kono in view of Nakanishi, in further view of Arledge, discloses the touch panel of claim 1 (see Kono figures 1, 4 and 5; Nakanishi figures 5 and 6; Arledge figures 3, 5, and 6, for instance), and Arledge further discloses wherein the first, second, third, and fourth metal electrodes (66) are connected to first, second, third, and fourth signal applying lines (64) of the plurality of signal applying lines. Claims 7 and 15 are therefore unpatentable.

12. Regarding claims 8 and 16, Kono in view of Nakanishi, in further view of Arledge discloses the touch panel of claim 1 (see Kono figures 1, 4 and 5; Nakanishi figures 5 and 6; Arledge figures 3, 5, and 6, for instance), and Kono further discloses wherein the display device is a liquid crystal display device. Claims 8 and 16 are therefore unpatentable.

13. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kono et al. (US 2001/0043291) in view of Nakanishi et al. (US 6,781,642), and in further view of Arledge et al. (US 5,436,744) as applied to claims 1 and 9 above, and further in view of Murakami et al. (US 6,570,707).

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14. Regarding claims 5 and 13, Kono in view of Nakanishi, in further view of Arledge, discloses the touch panel of claims 1 and 9 (see Kono figures 1, 4 and 5; Nakanishi figures 5 and 6; Arledge figures 3, 5, and 6, for instance). However, Kono in view of Nakanishi, in further view of Arledge fails to disclose wherein the signal applying lines (66) for applying signals to the metal electrodes (64) on the upper substrate are printed on the upper surface of the first part of the FPC (60), and the signal applying lines (66) for applying signals to the metal electrodes (134) on the lower substrate (130) are printed on the lower surface of the first part of the FPC (190).

15. Regarding claims 5 and 13, Murakami discloses an LCD (see figure 2, for instance), wherein the signal applying lines (122) for applying signals to the metal electrodes (114) on the upper substrate (110) are printed on the upper surface of the first part of the flexible printed cable (190), and the signal applying lines (123) for applying signals to the metal electrodes (134) on the lower substrate (130) are printed on the lower surface of the first part of the flexible printed cable (190).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the line structure of Murakami in the touch panel of Kono in view of Nakanishi. The motivation for doing so would have been to reduce the cost of materials and the steps needed for manufacturing, as taught by Murakami (column 4, lines 42-45). Claims 5 and 13 are therefore unpatentable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHANAEL R. BRIGGS whose telephone number is

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(571)272-8992. The examiner can normally be reached on 9 AM - 5:30 PM Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathanael Briggs – 1/13/2009

/Andrew Schechter/
Primary Examiner, Art Unit 2871